No. 7100026

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Lockett Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGEV NOVELVARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED ANDMADEAPART HEREOF, AND THE VARIOUSREQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *b* even&en YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEEV OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY 'LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING'A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. 2 , THE UNITED STATES SEED OF THIS VARIETY (I) SHALL BE SOLD BY VARIETY NAME ONLY AS LASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS IED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Lockett BXL'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 26th *day of* February *in the year of our Lord one thousand nine hundred and* seventy-four

Attest:

L. R. Rollin
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz
Secretary of Agriculture

FORM GR-470
(12-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED
OMB NO. 40-R3712

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION	2. KIND NAME	FOR OFFICIAL USE ONLY
Lockett BXL	Cotton	PV NUMBER **7126**

3. *GENUS* AND SPECIES NAME	4. FAMILY NAME *(Botanical)*	FILING DATE	TIME
Gossypfum hirsutum L.	Malvaceae	2/10/71	1:30 XXX P.M.
	5. DATE OF DETERMINATION	FEE RECEIVED	BALANCE DUE
	February 9, 1970	$ 250.00 $ 250.00 $ 250.00	$ 0.00 $ — $ —

6. NAME OF APPLICANT(S)	7. ADDRESS (Street *and NO. or R.F.D. No., City, State, and ZIP Code*)	8. TELEPHONE AREA CODE AND NUMBER
Lockett Seed Company	P. 0. Box 1579 Vernon, Texas 76384	AC 817 552-5561

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Texas	May 31, 1947

12. Name and mailing address of applicant representative(s), if any, to serve in this application a receive all papers:

Dr. Kamal M. El-Zik
Vice-President for Research
Lockett Seed Company
P. 0. Box 1579
Vernon, Texas 76384

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

[X] 13A. Exhibit A, Origin and Breeding History of the Variety (See *Section 52 of the Plant Variety Protection Act.)*

[X] 13B. Exhibit B, Botanical Description of the Variety

[X] 13C. Exhibit C, Objective Description of the Variety

[X] 13D. Exhibit D, Data Indicative of Novelty

[X] 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. Does the applicant(s) specify that *seed* of this variery be sold by variety name only as *a class* of certified seed? *(See Section 83(a). (If "Yes," answer 14B and 14C below.),* [X] YES [ ] NO

14B. Does the applicant(s) specify that this variety be limited as co number of generations? [X] YES [ ] NO

14C. If "Yes," to 14B, how *many* generations of production beyond breeder seed? [X] FOUNDATION [X] REGISTERED [X] CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant *variety believes that the variety is distinct, uniform,* and *stable as required in Section 41 and is entitled to protection under the provisions of Section* 42 *of the Plant Variety Protection Act.*

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

June 27, 1973
(DATE)

Kamal M. El-Zik
(SIGNATURE OF APPLICANT)

1

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and $250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, 6525 Belcrest Road, Byattsville, Maryland 20782. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Insert the date the applicant determined that he had a new variety based on the definition in Section 41 (a) of the Act and decision is made to increase the seed.

13a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication, Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.

13b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.

13c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.

13d Provide complete data indicative of novelty. Seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty may be submitted. Seeds submitted may be sterile.

13e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

EXHIBIT A

"The Origin and Breeding History of the Variety"

I. The parents used in developing Lockett BXL were Lockett 4789-A selection number 31, SP 19, and SP 20.

Lockett 4789-A is a commercial cotton variety developed and maintained by Lockett Seed Company. Selection number 31 is one of the superior strains in the maintenance program of that variety. The two strains SP 19 and SP 20 were developed and made available to our organization by Dr. Luther S. Bird, Professor, Department of Plant Sciences, Texas A&M University.

The (Lockett 4789-A (31) x SP 19) x SP 20 cross was made to combine the features of Lockett 4789-A; high yielding ability, earliness, storm proof boll, compact fruiting, and high fiber quality; and bacterial blight, fusarium wilt-nematode resistance from SP 19 and SP 20. SP 19 and SP 20 carry the gene combination $B_2B_3B_7$ for bacterial blight resistance.

The breeding method used in developing Lockett BXL was the Pedigree method.

EXHIBIT A (Continued)

II. Lockett BXL was derived from crossing Lockett 4789-A (31) with SP 19 in 1964, in our breeding nursery at Lockett, Texas. The F_1's were sent to Iguala, Mexico, in the Fall. Individual F_2 plants from this cross were selected and crossed with SP 20 in 1965, and the crosses sent to Iguala in the fall. Individual plants were selected from the F_2 generation in 1966 and the seed sent to Iguala in the fall for increase.

All plantings were made on Fusarium wilt-nematode infested land at Lockett. Fusarium wilt (Fusarium oxysporum f. vasinfectum (Atk.) Snyder and Hansen) is always more severe when associated with the root-knot nematode (Meloidogyne incognita Chitwood), and is usually referred to as the Fusarium with-nematode complex. Severe to moderate natural infestation of bacterial blight (Xanthomonas malvacearum (E. F. Sm.) Dowson) occurs at this location.

From 1967 to 1969 selected progenies were grown, evaluated, tested and selected. Counts were made each season of plants showing any wilt or bacterial blight symptoms. Fiber samples were taken from the selected

EXHIBIT A (Continued)

progenies for disease resistance and agronomic performance each year for laboratory evaluation. Duplicate plantings of the material were made each year at our breeding nurseries at Lockett and Ropesville, Texas. This permitted selecting material which performed well at both locations.

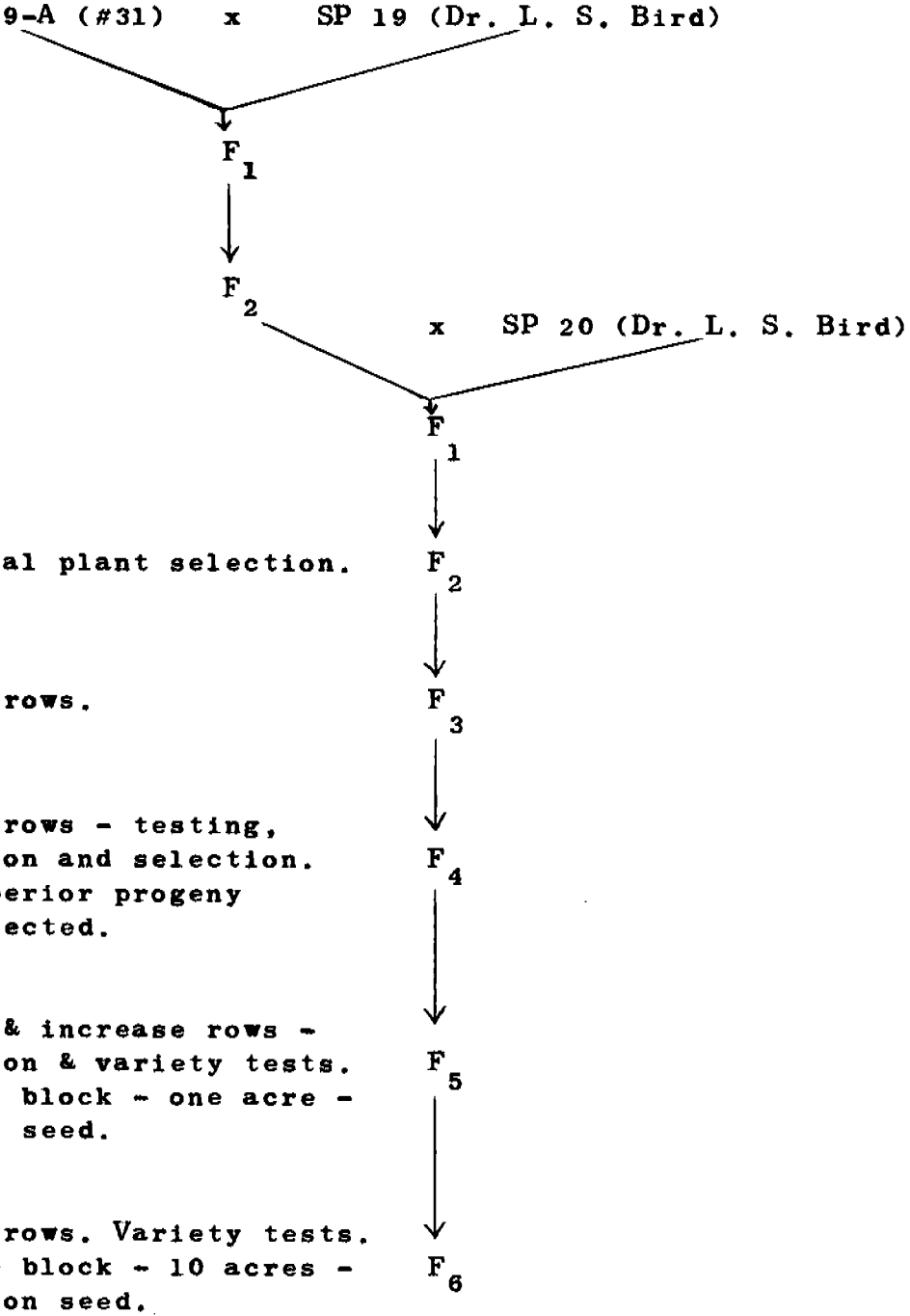
In 1967, four outstanding sister progeny rows were selected. Additional individual plants were selected from these progenies. A seed mixture of equal parts of these four strains made up Lockett BXL, which was grown in local and regional variety tests by experiment stations and county agents over a wide area of Texas and Oklahoma in 1968, 1969, and 1970. These tests were conducted on dryland and under irrigation. The variety proved to be superior. Seed of the variety - breeders seed - was increased on the Lockett Seed Company Farms in 1968, and foundation seed in 1969 and 1970, as shown in the diagram.

From 1968 to 1970 the multplication of Lockett BXL was under observation and inspection by the Texas Department of Agriculture. Our new cotton variety Lockett BXL was approved for certification on February 9, 1970, by the Texas Seed and Plant Board. No seed of Lockett BXL had been sold for planting purposes prior to April 11, 1970.

III. No variants are associated with Lockett BXL.

EXHIBIT A (Continued)

Pedigree of Lockett BXL



Lockett BXL approved for certification on 2-9-70 by The Texas Seed and Plant Board.

EXHIBIT B

"A Botanical Description of the Variety"

I. Lockett BXL is an American Upland cotton variety (Gossypium hirsutum L.). The variety has normal seed coat and size, high seed quality, seedling vigor, excellent root system, and is early fruiting. Its growth habit varies from determinate to indeterminate with time of planting and cultural management. The unique characteristics of Lockett BXL is its resistance to the Fusarium wilt-nematode complex and tolerance to race 1 of Xanthomonas malvacearum, the causal organism of bacterial blight.

II. Lockett BXL is a uniform and stable variety, with a short to medium main stem, medium foliage, semi-compact plant conformation, few vegetative branches, short to medium fruiting branches, compact fruiting, storm resistant to storm proof bur, and early to medium-early maturing. Flower and leaf color are typical of American Upland cotton.

A comparison of Lockett BXL and Lankart 57 is presented in the attached table. Mean performance of the two varieties is compiled from variety tests in ten locations over a two year period in Texas and Oklahoma.

EXHIBIT B (Continued)

Lockett BXL has less vegetative branches, smaller leaf size, and slightly smaller boll than Lankart 57. Lockett BXL is about a week earlier in fruiting and maturing than Lankart 57, which is reflected in the 4.3% increase in percent first harvest. In these variety tests, average lint yield of Lockett BXL was 27 pounds higher with a longer (1/16 inches) and stronger (700 PSI) fiber in comparison with Lankart 57.

Lockett BXL is resistant to the Fusarium wilt-nematode complex and tolerant to bacterial blight, while Lankart 57 is susceptible to both diseases.

EXHIBIT B (Continued)

Average characteristics, lint yield, lint percent, and fiber properties of Lockett BXL and Lankart 57, compiled from ten variety tests in Texas and Oklahoma.

Characters	Lockett BXL	Lankart 57
Vegetative branches	less	more
Leaf size	medium	large
Boll size	medium-large	large
Fusarium wilt-nematode	resistant	susceptible
Bacterial blight	tolerant	susceptible
Lint yield in pounds	426	399
Lint percent - pulled	23.8	24.2
- picked	34.0	35.1
Percent first harvest	74.1	69.8
Fiber properties -		
Length - staple - inches	34	32
2.5% span length	1.10	1.00
% uniformity	46.0	47.7
Strength -PSI (1000)	86.3	79.3
Fineness	4.1	4.4

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-8 (10-2-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C (Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON (*GOSSYPIUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Lockett Seed Company

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
P. O. Box 1579
Vernon, Texas 76384

FOR OFFICIAL USE ONLY

PVPO NUMBER
7126

VARIETY NAME OR TEMPORARY DESIGNATION
Lockett BXL

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. SPECIES:

[1] 1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

[0] EASTERN [2] DELTA [2] CENTRAL [2] HIGH PLAINS [2] EL PASO AREA
[1] WESTERN LOW HOT VALLEYS [0] SAN JOAQUIN [ ] OTHER (*Specify*) _____

3. MATURITY (50% Open Boll):

[0][5] NO. OF DAYS *EARLIER* THAN . . . . . [7]
[ ][ ] NO. OF DAYS *LATER* THAN . . . . . [ ]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) _____

4. PLANT HABIT:

[3] 1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT

[1] 1 = FOLIAGE SPARSE 2 = DENSE 3 = OTHER (*Specify*) _____

5. PLANT HEIGHT:

[1][5] CM. *SHORTER* THAN . . . . . [4]
[1][8] CM. *TALLER* THAN . . . . . [7]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) _____

6. MAIN STEM:

[3] 1 = LAX 2 = ASCENDING 3 = ERECT

[11] CM. TO FIRST FRUITING BRANCH

[0][7] NO. OF NODES TO FIRST FRUITING BRANC (*from cotyledonary node*)

7. LEAF:

[1][4] CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENSE:

[3] 1 = GLABROUS (HAIRS AS SPARSE AS D_2 SMOOTH)
2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H_1 OR H_2) 5 = OTHER (*Specify*) _____

9. LEAF COLOR:

[2] 1 = VIRESCENT YELLOW 2 = LIGHT GREEN 3 = DARK GREEN (*Acala-442*) 4 = RED
5 = OTHER (*Specify*) _____

10. LEAF TYPE:

[1] 1 = NORMAL 2 = OKRA 3 = SUPER OKRA 4 = OTHER (*Specify*) _____

11. FLOWER:

[1] 1 = NECTARILESS 2 = NECTARIED

[1] Petals: 1 = CREAM 2 = YELLOW [1] Pollen: 1 = CREAM 2 = YELLOW

12. FRUITING BRANCH TYPE:

[2] 1 = CLUSTER 2 = SHORT 3 = NORMAL [1] 1 = DETERMINATE 2 = INDETERMINATE

13. GOSSYPOL CONDITION:

[3] 1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS
4 = OTHER (*Specify*) _____

[1] 1 = NORMAL BUD GOSSYPOL 2 = HIGH BUD GOSSYPOL

14. SEEDS:

[0][1][2] ± [0][1] SEED INDEX (*Fuzzy seed basis*)

[2] Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16) 3 = HEAVY (ACALA SJ-1) 4 = OTHER (*Specify*) 9

Exhibit D

Data Indicative of Novelty

Novelty is based on the unique combination of the following characters:

'Lockett BXL' is similar to its one parent, 'Lockett 4789-A,' except it has (1) seedling disease escape, (2) it is resistant to the Fusarium wilt-nematode complex, (3) it is tolerant to bacterial blight, (4) it has a higher lint percentage and (5) 'Lockett BXL' has a higher yielding ability and a broader range of adaptability and stability than either of its parents.

EXHIBIT E

"Statement of Basis of Applicant's Ownership"

The applicant, Lockett Seed Company, is the actual breeder and developer of Lockett BXL through its research staff.